



THE RARA RAG

Newsletter of The Rochester Amateur Radio Association, Inc.
Founded in 1931

DECEMBER, 2021
VOLUME 74, ISSUE 4

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MERN - MILITARY EMERGENCY RADIO NET

SCOTT THEIS, W2LW, RARA VICE PRESIDENT

The December presentation will be about the New York Guard's Military Emergency Radio Network presented by First Lieutenant Ross Mazzola. Ross (KC2LOC as many of you know him) has been involved with amateur radio since 2003 with Amateur Extra privileges.



Ross has been on the RARA Board of Directors, has been a member of Monroe County RACES and ARES and is a former member of the Military Auxiliary Radio System (MARS). Ross enlisted in the New York Guard in 2015 and became a commissioned officer in 2018 where he served as the Signal Operations Officer for the 10th Area Command. Today Ross is the Commander of the New York Guard 21st Detachment in Rochester.

Ross' presentation will describe the New York Guard and how its volunteer "citizen Soldiers" have been deployed on missions ranging from the Lake Ontario flooding to the ongoing COVID-19 pandemic. The focus of his talk will be on how HF radio is used to provide statewide contingency communications for the National Guard and other State military forces.

Please join us on Wednesday, December 1st, 2021, 7:00PM either at the Boy Scouts Headquarters at 2320 Brighton Henrietta Townline Road, Rochester, New York 14623 or online by registering at:

<https://attendee.gotowebinar.com/register/6922222162337328655>

If you come in person, you must be vaccinated and the BSA COVID rules apply (mask required).

RARA



K2JD

N2EH

W2EOC

BOARDZ BUZZ

KARL HEINZ KREMER, K5KHK, RARA SECRETARY

This is the first board buzz I am writing since I took over as the Education Coordinator for RARA back in the early summer. I am also in my last year as secretary for the club (there is a limit of three years). Today I would like to focus on the education role.

I often call ham radio a hobby of a thousand hobbies. There are so many facets and niches in our hobby that makes it possible to do something new several times a year and never get bored. This also means that we are (or can be) perpetual students when we try a new mode, a new operating situation, a new rig, a new tool, or in general something we've never tried before. On the other hand, this also puts us in the position of being Elmers in those areas that we've honed our skills for decades, years, or even just months. There is always something new coming down the pipeline and sometimes even a few months of head start will put you into the expert category.

I would encourage all our members to embrace this role of "somebody who knows a little more than others in a certain field" and offer help and advice. This is especially important to those new to the hobby, but even those of us who have been licensed for a longer time can benefit.

In our license classes, we cannot teach our students how to be a ham, we only have time to teach them what they need to know to pass the license test. I do try to throw a morsel of ham wisdom in every now and then. This means that there is opportunity for those who have worked through the initial hurdles and speed bumps and became proficient on the air to lend a hand to somebody who just passed their Technician class license test, or upgraded to General and are now dealing with the daunting task of setting up an HF station, or getting on the air for the first time.

Do you remember how it felt when you made your first HF contact? Help somebody to have the same experience.

And after that, turn around and pick one of the other 999 facets of ham radio that you have not yet explored and learn something new. If you ask around, chances are that there are a few Elmers out there who can help you get started. How do we connect those who have experience to share and those who are trying to learn a new skill? RARA has a number of forums that we can utilize:

- In every issue of the Rag, we publish a list of Elmers. Everybody on that list will welcome questions from our members.
- The monthly Elmer's Corner on the first Saturday of the month at 10am is a great way to ask a question if you don't know who might know the answer.
- Our groups.io mailing list turned out to be a great way to throw out a question and see who might get back to you with an answer.
- The same goes for our Facebook group. Make sure you connect with the correct RARA "entity" on Facebook: We have a page, which is mainly for publishing club related information, and we have a group, which is for our members to discuss "stuff".

Be a teacher, be a student – and most importantly, have fun!

CALENDAR OF EVENTS

WEDNESDAY DECEMBER 1, 2021 - General Meeting

7:00 PM - AT THIS LINK or IN-PERSON

<https://attendee.gotowebinar.com/register/6922222162337328655>

THURSDAY DECEMBER 2, 2021 - RARA Board of Directors Meeting

6:30PM ON LINE

Email request for link to secretary@rochesterham.org

SATURDAY DECEMBER 18, 2021 - VE TESTING

10:00AM Rochester Institute of Technology, Bldg 16

Schmitt Interfaith Center, Skalny Room

See page 17 for details



EDUCATION

Karl Heinz Kremer, K5KHK, Education Coordinator

RARA LICENSE COURSES

Karl Heinz Kremer, K5KHK, License Class Coordinator

By the time this gets published, we will have completed the Fall license classes, and helped a number of our members get their initial license. As of today, I know six of our Technician students who passed the test (one even passed the General test), and five of our General class students have upgraded, one made it all the way to Extra.

The **Technician** license class will be taught by Karl Heinz Kremer – K5KHK – and will be on Tuesday evenings from 6pm to about 8pm, starting on 1/11/2022.

The **General** license class will be taught by Freddy Sulyma – WB2GFZ – and will be on Thursday evenings from 6:30pm to about 8:30pm, starting on 1/13/2022.

We are again not able to provide an Extra license class, but we are working on a “Amateur Extra Without the Math Anxiety” workshop specifically about the math part of the Extra curriculum. This will be three or four sessions. The details are still being worked out, but if you are interested, please let us know.

Classes are free to RARA members, and if you would like to sign up, please send an email to education@rochesterham.org. License manuals are available for \$25 – if you are interested in a manual please also send an email. The Technician test will change in July of 2022, and with that, our supply of the license manual will change as well. We are running low on Technician license manuals; once we are out, you will have to pay the full price and get your own.

RARA ELMERS CORNER

Suzanne Bishopp, W2SUZ
Rich Bishopp, KD2UBJ
Elmers Corner Coordinators

The last Elmer's Corner meeting was great! We received a question on propagation ahead of the meeting which gave Karl Heinz, K5KHK, time to put together a very informative presentation. We also talked about antennas and getting your first HF rig. There is a link to the November Elmers Corner below.

November 2021 Elmer's Corner:
<https://youtu.be/CqG5LYLmhuw>

The Next Elmer's Corner is December 4th. We will again have an open general Q&A meeting, so bring all of your questions, or tips and tricks and anything else you would like to share! You can submit questions early if you would like, this way we can give our Elmers a chance to prepare. Submit those early questions to: elmerscorner@rochesterham.org.

Elmer's Corner is for ALL hams! Beginners and experienced hams.

If you have a specific topic you would like to learn more about, please let us know. We will do our best to find the right Elmer to present on the topic and get the answer to your questions.

Thanks, and see you at the December Elmer's Corner!

December ELMERS CORNER

Saturday, December 4th from 10AM – 12PM

Join Zoom Meeting
[https://us02web.zoom.us/j/83484674667?](https://us02web.zoom.us/j/83484674667?pwd=MG5DZXd6SFovN3lXa0NNTzZm5UnBLUT09)
[pwd=MG5DZXd6SFovN3lXa0NNTzZm5UnBLUT09](https://us02web.zoom.us/j/83484674667?pwd=MG5DZXd6SFovN3lXa0NNTzZm5UnBLUT09)
Meeting ID: 834 8467 4667
Passcode: 786545

RARA ACADEMY WORKSHOPS

HELP WANTED

We are still looking for somebody to coordinate our RARA Academy sessions. If you are a happy participant of any previous sessions (either as a presenter, or as an attendee), and you want these sessions to continue, please consider volunteering your time. If you want to learn more about the role, please get in touch with me: education@rochesterham.org

If you have an idea for a potential Academy session, please let me know as well, and I will try to find a presenter.

MORSE CODE TRAINING

DAVE WILSON, WA2HOY, RXCWG COORDINATOR

The RXCW Group assists Hams wanting to learn Morse Code or to develop their CW skills.

BEGINNERS MORSE CODE ZOOM CLASSES

Peter Fournia, W2SKY, hosts Morse Code classes on Thursday evenings 7pm. No experience required. Join the group at any session. Register at: pfournia@gmail.com

MORSE PRACTICE FOR ALL LEVELS ON ZOOM

Tim Brown, WB2PAY, hosts code practice for all levels on Wednesday evenings at 7pm. Register at: tjbrown@rochester.rr.com

MORSE PRACTICE ON AIR

Tim Brown, WB2PAY, hosts on air practice on Tuesdays at 2PM on 6M at 50.250MHz. W1AW - <http://www.arrl.org/w1aw-operating-schedule>

Time	Mon	Tue	Wed	Thu	Fri
9 AM		Fast	Slow	Fast	Slow
4 PM	Fast	Slow	Fast	Slow	Fast
7 PM	Slow	Fast	Slow	Fast	Slow
10 PM	Fast	Slow	Fast	Slow	Fast

SLOW - 5, 7 1/2, 10, 13 and 15 wpm

FAST - 35, 30, 25, 20, 15, 13 and 10 wpm

FREQ(MHz) - 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 50.350, 147.555

W1AW Code Practice MP3 Files: <http://www.arrl.org/code-practice-files>

To set up a cw sked, contact Peter at pfournia@gmail.com or Tim at tjbrown@rochester.rr.com

CW ELMERS

Name	Call	Area	Email
Ned Asam	W2NED	Pittsford	w2ned@frontiernet.net
Tim Brown	WB2PAY	Ogden	tjbrown@rochester.rr.com
Pete Fournia	W2SKY	Penfield	pfournia@gmail.com
Bill Hopkins	AA2YV	Brighton	whopkin4@naz.edu
Bob Karz	K2OID	Webster	rkarz@rochester.rr.com
Joe Rowe	AG2Y	Webster	ag2y@rochester.rr.com
Harry Williams	KF2TV	Webster	harryw7872@gmail.com

RADIO ELMERS

Name	Call	Area	Email
Tim Brown	WB2PAY	Ogden	tjbrown@rochester.rr.com
Dave Carlson	N2OA	Batavia	kdcarlso@gmail.com
Lawrence Hill	N2AJX	Henrietta	lawrence.hill@rit.edu
Rich Hoffarth	K2AXP		rhoffarth2000@yahoo.com
Bill Kasperkoski	WB2SXY	Pittsford	wb2sxy@gmail.com
Don Kiser	AC2EV	N Greece	dkiser100@gmail.com
Karl Heinz Kremer	K5KHK	Chili	k5khk@khk.net
Tim Magee	WB2KAO	Greece	585-704-5747
Mike Moore	KC2NM		mikemoore@ieee.org
Peter Schuch	WB2UAQ	Perinton	pschuch@rochester.rr.com
Forest Shick	WA2MZG	Webster	fshick3@gmail.com
Dave Timmons	W2DST	N Greece	dstimmons@gmail.com
Steve Verzulli	KA1CNF		verzulli@yahoo.com
Dan Waterstraat	W2DEW	Henrietta	higreen@rochester.rr.com

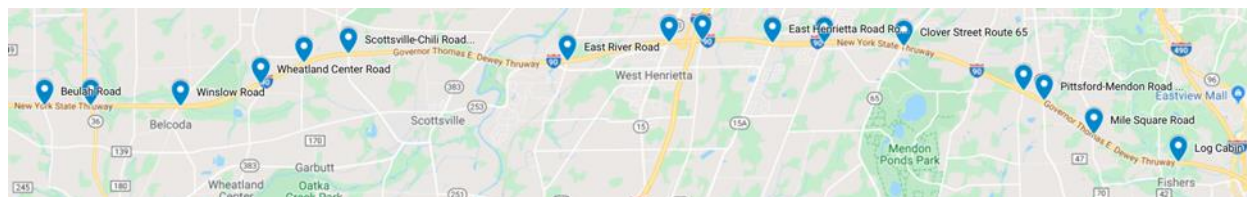
PUBLIC SERVICE REPORT

MIKE MOORE, KC2NM, PUBLIC SERVICE COORDINATOR

The Pumpkin Patrol was held on the 16 Monroe County Thruway bridges on Saturday, Oct. 30 and Sunday, Oct 31. There were no vandalism incidents reported either night. We again used the ARES repeaters 146.61 and 444.45 for Pumpkin Patrol. This repeater system has a number of remote receivers and provides good coverage of Monroe County. Ed K1EM did a great job organizing the event! He has sent each of the participants a "Thank You" note, reported the service hours to Tim K9VB, and has requested the recognition certificates from Trooper Howard of the NYS Troopers. In addition to providing us an opportunity to hone our operating skills in a real-world service situation, a side benefit of this event is the manpower savings for law enforcement organizations because we provide the bridge monitoring role. Participants were:

KD2TWM, KD2UWD, K1PY, N2YPM, KD2KCJ, KC2NM, KD2EHW, KD2UBJ, W2SUZ, WA2CHV, K2UW, KC2NLD, N2BNE, WB2QCJ, N2PHB, WM2W, KD2IOB, KD2TXQ, W2CPD, KD2AZE, KA2WNS, K4GWA, KD2RAF, KD2PQP, N2IZX, WB2KAO

Most of the hams provided bridge duty but special thanks go to Tim, WB2KAO and Lynn, N2IZX who served as net control operators. Goodie Patrol duties were provided by Chuck, KC2KPL, Diane, and Lee, WB2JOR



To add some additional fun for Pumpkin Patrol participants, Ev, W2EV organized a QSO party to be held during a portion of the service event. This was not a contest but there were separate operating recommendations for Home Stations and Pumpkin Patrollers. The idea was for stations to contact each other on simplex between call ups on the Pumpkin Patrol net. Thank you Ev, W2EV for adding to our fun.

There was some additional coordination communication with our Thruway neighbors to our east and west. Dave, KD2RAF and Jeff KD2PQP made contacts with the Drumlins and SIARC operations to our east as well as the Gene-see and Erie county operations to our west. A bonus contact was made by Jack W2JAT, a long time participant in the Pumpkin Patrol. It was great to hear you on the net, Jack.

Please mark your calendars for our upcoming RARA Public Service Events

I am waiting for word from RMSC regarding the Holiday Science and Technology Days.

Holiday Science & Technology Days	Rochester Museum & Science Center	Monday - Wednesday	Dec. 27-29, 2021
2022 ADA Tour de Cure	Xerox Campus, Webster	Saturday	June 11, 2022

PROFESSOR'S Pic(k)s

JEFF SONSTEIN, KD2RRB

[The Microprocessor Is 50](#)

[New Mexico Chilies and the Space Station](#)

[Laser Communications Demonstration](#)

[Keyboards and Arduinos](#)

[Ham Radio Call Sign History](#)

[MRI - SDR](#)

[HQ-100AC](#)

DECEMBER RAFFLE PRIZES

- Logbook
- Soldering Station
- HT Antenna

Coming in January

- Small Scope



Courtesy December, 1964 QST

Membership – Time to Renew!

- Over 570 members at the End of September
- Sixth largest ARRL affiliated club
- Memberships Lapsed on October 1st
- Renew or join now at:
<https://www.rochesterham.org/>
- If you have a problem renewing, please email us at:
membership@rochesterham.org



RARA MEMBERSHIP

TIM BARRETT, K9VB, RARA PRESIDENT AND MEMBERSHIP SECRETARY
membership@rochesterham.org

I am pleased to report that we ended the membership year with over 570 fully paid members.

Having a strong membership is a great help in attracting good speakers and negotiating resources for the club. I will be shortly writing to the ARRL to report our club size as required for all ARRL affiliated clubs. Currently we are in the top 6 of national ARRL affiliated clubs according to ARRL statistics which is quite an achievement. Being part of such a large and successful club should be a source of pride to all our members.

On September 30th our membership year ended and so we are now back into

renewals season. Some of you have already renewed for the 2021 / 2022 season; thanks for doing that so promptly.

If you have not renewed yet, please take a moment now to go to the [renewals page](#) and get your membership up to date. If you don't recall your access code there is an option on that page to have it emailed to you. You can pay by credit card (you do not need a Paypal account) or there is an option to pay by mailing a check. Those of you reading this who are not members, or have allowed membership to lapse a while ago, please consider joining / rejoining [here](#).

Annual rates are very reasonable, \$15 for a full member (\$10 for Seniors) and \$10 for Associate members without a callsign. Associates get a free upgrade to full member when they get their ticket. Also note that you can join family members living in the same household as you for just \$5 per additional person.

Don't Delay, Renew Today!

2021 RARA ANNUAL AUCTION

SCOTT THEIS, W2LW, RARA VICE PRESIDENT

Our annual auction returned this year after last year's little COVID skip. We should all thank Brian O'Conner (KA2CGB) for managing the processing and for the tireless amount of work he has put into surveying, picking up, sorting, testing and cleaning up donated equipment. I would also like to thank Ed Gable (K2MP) for his excellent work as auctioneer and for making the evening interesting. Also, thanks to all the folks that helped set up, run, and tear down after the event. This was a member event, and we had plenty of member goodies on the auction block. Overall, most of the items up for auction went to new homes. I look forward to next year!

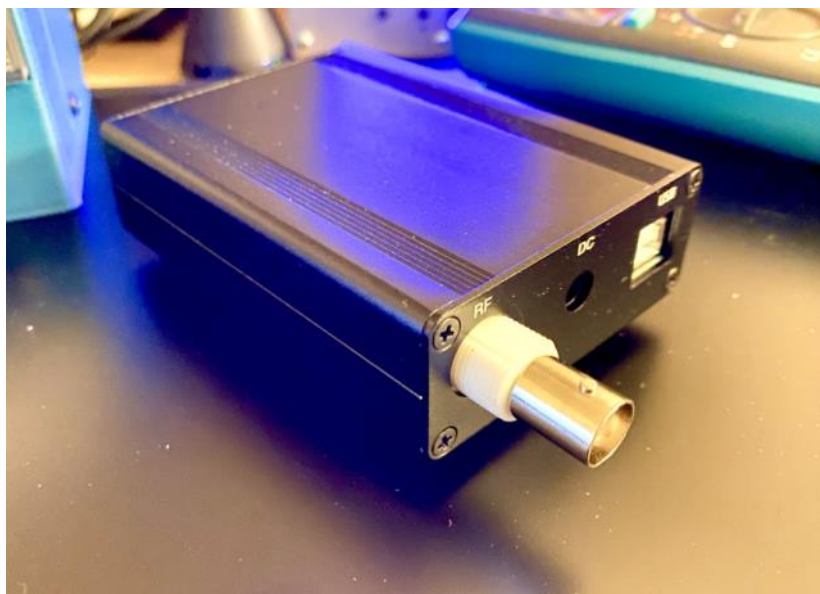


Special thanks N2BNE for many of the photos.

QDX - A DIGITAL RADIO FOR YOUR SHIRT POCKET

KARL HEINZ KREMER – K5KHK

If you've talked to me about QRP, there is a pretty good chance that I've tried to sell you on the QRPLabs QCX CW transmitter, which in my opinion is the best value in ham radio. Hans Summers – G0UPY – did it again and released a hit kit: The QDX sold out in 14 minutes when it went on sale on 10/11 a little more than a month ago. I happened to be in a state park, doing a POTA activation with Rich Bishopp – KD2UBJ, when the QDX's order page became active. Despite a bad Internet connection and a server that was buckling under the load of a huge number of orders, I managed to get my order in. It was a belated birthday present to myself.



So, what is the QDX? The abbreviation stands for the QRPLabs Digital Transceiver. It is optimized for modes like FT8, that have one continuous carrier at a given time. This will not work (at least for now) for phase shift keyed modes like PSK31 but can be used for FT8, FT4, JS8, RTTY or even CW (even though with bad key clicks).



The radio gets connected to the computer with one USB cable that is used for both the audio interface and CAT control. In addition to that, it needs of course power (9V or 12V – more about that further down), and then the antenna connection via BNC. That is it. For most computers, there are no drivers to install.

The receiver is similar to what is in the QCX radio and is based on a Tayloe detector that provides IQ signals that will then be interpreted by the processor on the board. The transmitter is where it gets interesting: The audio signal from the computer is not modulated on a carrier as an SSB signal but analyzed by the processor to determine its frequency. That frequency is then converted to the one RF frequency that would otherwise result from the SSB modulation but is now generated directly by a digital signal generator (an Si5351 programmable CMOS clock generator). This means that there are no mixing by-products that could create a messy signal, we end up with one clean signal. The disadvantage is that this process will not work for PSK signals. Hans did comment on the QRPLabs groups.io group that there might be a way to get this working as well in the future.

When the radio is assembled, the builder needs to decide if it should work with a 9V or a 12V supply. Depending on that, the output transformer needs to be wound differently so that the output power stays around 5W, and one does not kill the output transistors when running with a higher supply voltage.

The kit has all the SMD (Surface Mount Device) parts already installed, and only the thru hole parts need to be soldered to the board. That includes winding a few toroids. Most of them are straight forward inductors, but there is one transformer that requires a trifilar winding, and one inductor with a few taps. After the construction is finished, there is one tricky part: There are four pre-installed SMD inductors on the board that need to be removed and replaced with wired components. Soldering these axial inductors without ripping copper traces or pads off the board is a little challenging. But even with that complication, compared to building the original QCX, or the QCX mini, this kit is a bit less complex.



There are no adjustments that need to be made during constructions, or user controls for operating the radio, everything is done in software.

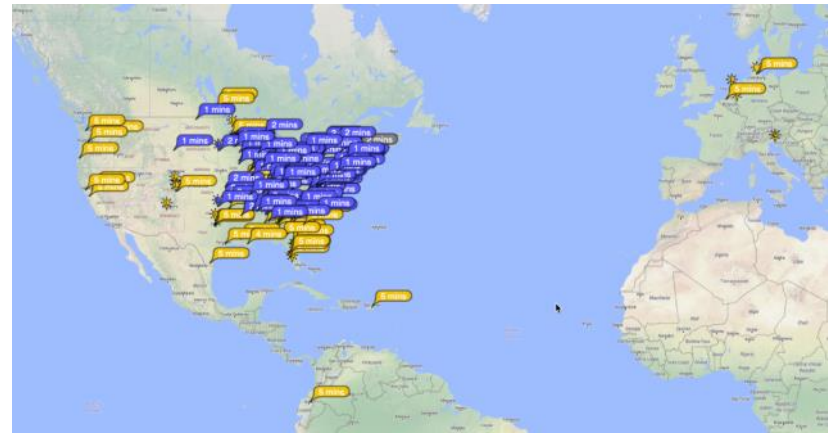
I ran into two self-inflicted problems: One connection of the tapped inductor was not soldered correctly (you have to burn off the coating on the magnet wire while soldering). The solder joint looked good, and when I tested for conductance, it seemed OK, but during the first test with the powered on radio, I had a problem with the signal strength of the received signals. A forceful touchup of those solder joints fixed this problem. The second issue was a solder bridge which I found by carefully inspecting the board with a magnifying glass.

Does it work? Of course! For FT8/FT4, one does not need a boatload of power, 5W is enough to get out and to make contacts. The only limiting factor is that the bands supported are only 80/40/30/20m, and with the solar cycle ramping up, it would be nice to have access to some higher bands. However, the radio might be the perfect companion for a POTA activation.

I have Mint Linux installed on an old Chromebook that provides the perfect smallish computer platform for a portable setup.

Look forward to me activating POTA parks using the FTx modes.

Here is a reception report of my FT8 signals on both 40 and 20m around 9am in the morning. I let them both run for a couple of minutes (and had one QSO) – the QDX' 5W signal does get out:



Here is the bad news about the QDX: Right now the QDX is sold out. Because of the global semiconductor shortage, Hans is scrounging the parts for a 2nd batch of about 350 more kits, but after that, it may take a while for the next batch to arrive. Given how fast it sold out the first time around, you will have to sign up for the QRPLabs mailing list and wait for an announcement to find out when the next batch goes on sale and then set your alarm to be ready to hit the buy button. The web site is <https://www.qrp-labs.com/qdx.html>



WINLINK FOR ROCHESTER

PAUL CONAWAY, KD2DO

There is now a VHF Winlink station for the Rochester area. It became operational October 26.

It serves both Packet and VARA-FM users.

It operates on 145.03 MHz from atop 111 Westfall Road and transmits 80 watts. Beacon bursts are being sent out every 10 minutes, to aid in testing the coverage area.

Preliminary testing indicates that it should have pretty good range. The beacon has been heard many places around the city and adjacent counties. On a recent trip to Syracuse I heard the beacon at exit 41 and again at exit 40 (Weedsport). We have had reports from near Conesus Lake. Even if you are not ready to transmit Winlink messages you can still listen with any FM rig for the beacon. Please send signal reports to the Trustee: KD2DO@arrl.net.

If you have never worked Winlink before, it is not any more difficult than setting up to use FLDIGI on VHF. There are plenty of videos on YouTube to get you started. The necessary software is at Winlink.org. That website also has instructions for getting started in an area called the Book of Knowledge.

If you get set up and are looking for someone to talk to, just send a "Hello World" message to KD2DO or to KA2ENE. We will reply ASAP.

For an interesting discussion about Winlink from the User's perspective, go to ARRL's On The Air Podcast for August 18 2021.

We hope to have many other Winlink users soon and may plan to have a local "Winlink Wednesday" net like activity to get users familiar with the system. Announcements will be here in the RARA RAG.



This is the view looking South from the top of the County Public Health building at 111 Westfall road, where the new VHF Winlink station is located.

CHALLENGE CAMPOREE

STEVE FELL, K2SRF

Thank you Jacob Beha KD2UWD for the great help during the Challenge Camporee at Babcock Hovey. We had around two hundred scouts stop at our Ham Radio Station and I believe we sparked a real interest in four and a possible interest in an additional four scouts.

We had two HF radios and two 2 meter radios on line. It was a show and tell and his help was greatly appreciated.

Submitted By Seth Irwin, KD2QZG

"What we do during our working hours determines what we have; what we do in our leisure hours determines what we are."
George Eastman

RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN

20 Years Ago, December 2001

RARA's VP and Program Chair, Marykay Vesco KC2DPG, wrote to introduce a very interesting program that yes, did involve radio, but not necessarily the type that we use on a daily basis. The presenter, Joe Hood, K2YA, recently retired from Kodak and who is an accomplished and avid instrument rated pilot, talked on aeronautical electronics in use today. His topics included the different radios and their use for communications, direction finding, and much more. This was also the annual joint meeting between RARA and one of the three Kodak Amateur Radio Clubs, in this case the Kodak Park group. The venue was Kodak's Theater on the Ridge, 200 Ridge Road West. Richard Goslee, K2VCZ, announced a new RARA incentive titled the RARA Memorial Scholarship program. This annual scholarship has been funded by generous donations, from people like you, in memory of Leland (Lee) Zwack W2WPF, William Buchan W2OMV, and William Resch K4VOS. The scholarship is available to any licensed radio amateur who is pursuing any degree in a 2 yr or higher accredited college. RARA's first scholarship went to Kellie M. Gauvin, daughter of Mr. and Mrs. Vic Gauvin, K1PY. Bill Kasperkowski, WB2SXY, representing scouting and their Jamboree on the Air or JOTA program, penned a nice article telling of the recently completed world-wide event that included gatherings of scouts throughout the globe that included using ham radio to communicate with each other. Bill said the English lads reported some communication difficulties as the American boys had a rich and funny accent. Coordinators of the event were John Van Griethuysen, N2BNE and John Gilly W3OAB. Other hams assisting were from RARA and included: John KC2DVX, Bob KC2EMP, Mark KC2GMG, Jack W2JAT, Warren AA2LQ, and Joe AB2ER. "Congratulations to the Rochester DX Association," was how Ed Gable K2MP, started his article announcing that the RDXA achieved 1st place nationally in the hotly contested Class 3A during last June's ARRL Field Day event. Operating from Webster Park, the group ran in the 100 watt class with both phone and CW and the most ever bonus points for extra efforts with solar power, traffic handling, VHF/UHF, satellites and more. (Note: The RDXA would duplicate first place, or a top ten finish, six more times since then – Ed) Lloyd Caves, WB2EFU (N2PU) Continued his monthly musings this time writing about the results of the last RARA Auction. Simply stated "it was a great success," said Lloyd. Donations of equipment to RARA for auctioning off and the 10% auction charge to sellers brought in \$557.10 in one night that went right to the bottom line after minimal expenses. Ed Gable, K2MP, wrote to announce that he had just been appointed to an ARRL DXCC Field Checker. That title allows you, the local Amateur, to have your QSL Cards checked locally, by Ed, for the coveted DXCC Award without the expense and danger of loss by sending your precious cards off to ARRL HQ via mail. The service is still offered to RARA members and other local Amateurs and has been expended to cover DXCC, WAS, VUCC and WAC awards. Ed Holdsworth N2EH, reported that the move of the K2JD club station, from 111 Westfall Road, to the new Monroe County Emergency Operations Center on Scottsville Road, is progressing. Ed urged participation in RACES so that a ready pool of trained radio operators is maintained. Ron Roach W2FUI, continued is series of articles reporting on his visits to China where he met and made friends with several local Chinese radio amateurs. This month he told of meeting with Han Yi, BZ5HAN, who told of the difficulties with amateurs affording ham radio equipment. This is why club stations like BY4AA are so popular and as little as 1 amateur in a city of 1.6 million people are active from their own station. (2001 figures – Ed) With regret it was reported the Chuck oneske K2YCO, was reported as a silent key. Chuck was a past RARA President and a very active VHF/UHF operator and a regular high scorer in the ARRL January VHF Contest. There were no personal ham Want Ads in this issue. A very long-term advertiser, of over 20 years, was Glenwood Sales featuring surplus electronic parts from their Hague Street location.



the RARA RAG

Published by

ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

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DECEMBER 2001

NO. 4

Seasons Greetings To All

Joint RARA/Kodak Ham Radio Club Meeting

Marykay Vesco, KC2DPG

If it weren't for radio, aviation as we know it would not exist. At the December's joint meeting with Kodak Ham Radio Club, Featuring Joe Hood, K2YA, we'll find out why. His presentation will uncover for us the various radio systems used in the world of aeronautics. Systems that will help keep our planes safe in the air and on the ground.

Joe is uniquely qualified to speak on the subject, for in addition to being an excellent speaker, he has been a ham radio operator since he was 12 years old, is an accomplished Electronic Engineer—recently retired from Eastman Kodak Co. and holds a pilot's license with instrument certification. Not a small feat to achieve.

This joint meeting of the two clubs will be held at Kodak's Theater on the Ridge, 200 Ridge Road West, Building 28. This is located on the North side of Ridge Road West, between Lake Avenue and Dewy Avenue. Plenty of parking is located across the street from the theater. The meeting will take place in the Camera Club's auditorium located in the basement.

This should be a very interesting meeting. See everyone there.

New Life Member

Richard Goslee, K2VCZ

The Board of Directors would like to welcome our newest Life Member, John L. Reid, N5THV who lives in Macedon, NY. The presentation of a special "Life Member" certificate and name badge will be made to John at a future meeting.

Life membership in RARA has always been available but was never shown as a separate line item on the membership application until this year. Life membership is available for a single payment equal to 20 times the current annual dues. For anyone under the age of 65 that would be \$300.00, or if you are 65 or older it would be \$200.00.

Thanks John for becoming a Life Member.

RARA Meeting

December 7, 2001

8:00 PM

Kodak's Theater On The Ridge
200 Ridge Road West
Aviation and Radio

Presented by
Joe Hood, K2YA

Covering the top half of the front cover, this issue featured a picture of RARA's Charter of Affiliation with the ARRL, dated December 31, 1931. As such, that month represented fifty years of ties between the ARRL and RARA. The December meeting was announced as a combined affair with RARA and the Kodak Park Amateur Radio Club, a tradition that would continue for more than thirty years, with the meeting location being the Kodak Park Recreation Center in Building 28, on Ridge Road West. The program was a bit unusual for RARA in that computer graphically oriented databases were the topic. The presenters, from the Center for Governmental Research, Inc, were Scott Sherwood, Research Analyst and Peter Van DeMark, Senior Research Analyst/Cartographer. Ed Holdsworth, N2EH, wrote to update members on the move of the K2JD club station from 350 East Henrietta Road, the Iola Complex, to 111 Westfall Road, the new Emergency Operations Center. Congratulations were in order as a local ham Steve Pink KB2GG, made plans to leave Rochester and join the Ranks of the ARRL in the position of Training Program Manager. "Worked all Bus Radios" was a tongue in Cheek operating award unigly available only to Rochester area hams. It turns out the Rochester Transit company was upgrading all of their old FM radios and were willing to sell their old low band units to the local amateur community. Most all of the fifty plus units were converted to 52.525 FM Simplex and it became fun to QSO as many bus radios as possible, and the "Worked all Bus Radios Award" was born. Bill Gillette WB2KIW, wrote for the Rochester VHF Group encouraging all to help them build their scores in the very active ARRL January VHF Contest. At this time, Bill reported, the RVHFG was hosted monthly by Harris/RF on University Avenue. With regret it was reported that Fred Reynolds W2VS, was reported a Silent Key. Fred will be remembered by his invention of special RF Chokes designed to be placed into dipole antennas to make one antenna to operate on two or more bands. He called these "traps" and under the trade name "Reyco Traps" started a successful manufacturing business that was sold and is still on the market today as Uni-dilla products. From the Want Ads you could by a Hammarlund HQ-180 and Hallicrafters HT-40 from Dave Selbert KA2BOK. A new commercial advertiser was Russ McKay WA2CBU, now operating a video rental store called Classic Video in East Rochester.



The RARA RAG

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COMPUTERIZED GEOGRAPHIC ANALYSIS, FORECASTING AND MAPPING — DECEMBER 4th

The presentation at the December meeting will address Computer Techniques involving geographically oriented data bases, address matching techniques and display how geographically coded data can be mapped. Applications, including Ridesharing Programs and Housing/Land use inventories will be discussed. Hopefully, a map will be ready for distribution at meeting time, that will show locations of licensed Amateurs in the Rochester area, generated by these computer techniques.

Our guest speakers will be Mr. Scott D. Sherwood, Research Analyst and Mr. Peter Van DeMark, Senior Research Analyst/Cartographer

COMBINED RARA/KPARC MEETING at KODAK PARK RECREATION CENTER

from the Center for Governmental Research, Inc.

The meeting will be held at the Kodak Park Recreation Building #28, Ridge Road West, starting at 8:00 p.m. as guests of the Kodak Park Amateur Radio Club.

Park in the Kodak parking lot #11 directly across Ridge Road West in front of Building 28. If by chance it is full, drive east about 200 feet to the next light, then right into Primrose Street and almost immediately left into the Kodak Park parking lot #17. Enter the main entrance of Building 28 into the lobby, take elevator or stairs to the 1st basement and Camera Club theater.

VE TEAM

Testing on Saturday December 18, 2021
At a NEW LOCATION
Returning to RIT
ROCHESTER INSTITUTE OF TECHNOLOGY

Building 16 - **Schmitt Interfaith Center**
 43.08402626755475, -77.6734520379509

Parking: **U-Lot**
 43.08261562973969, -77.6739921659069
 It is off Andrews Memorial Drive

Room: **Skalny Room (SMT-A500)** there is an access door by the dock marked by the blue arrow.

Pre-registration is required visit:

<https://hamstudy.org/sessions/laurel/14612/inperson> to find the latest session.

COVID questionnaire and masks required:

<https://rochesterham.org/documents/education/2020-10-09%20COVID-19%20Questionnaire%20Form.pdf>

More information is available on the RARA website:

https://rochesterham.org/license_testing.htm

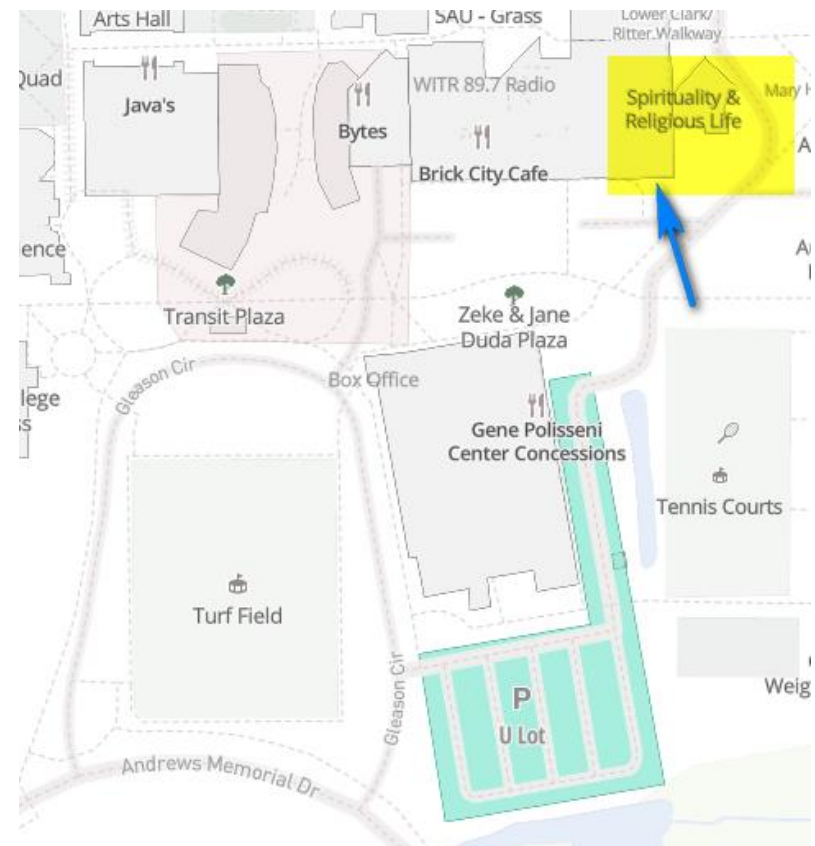
Applicants must supply their own PPE (Mask is a minimum), pen, pencil, calculator and be COVID negative and symptom free

Testing begins at 10:00AM.

Testing is free!

Clover Manning	KD2YGZ	T	Jeffery Bahtees	KD2YIO	T
Andrew Bush	KD2YIP	T	James Davis	KD2WXU	E
Kevin Denton	KD2WXS	G	James Fay	KC3TCV	T
Michael Freeman	KC1QCI	T	Yin He	KD2YIQ	G
Barbara Mack	KD2YIR	T	Daniel Markiewicz Jr	N2DTO	G
Gale McAndrew	KD2YIS	T	Annika Parshall	KD2YIT	T
Joseph Parshall	KD2VYT	G	Rebecca Parshall	KD2YIU	T
Erin Platteter	KD2YIV	T	William Stilson	KD2WSJ	G
Ghimire Avishek	KD2YIW	T			

New licensees names are in BOLD



RARA CALENDAR

TIM BARRETT, K9VB, MEMBERSHIP SECRETARY

	December 2021					
	Mon	Tue	Wed	Thu	Fri	Sat
			1 RaRa Monthly Meeting at BSA 7pm and online ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test VHF/UHF FT8 Activity Contest Walk for the Bacon QRP Test QRP ARCI Topband Sprint	2 RaRa BoD 6:30pm ONLINE ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NCCC Sprints RTTYOPS Weeksprint NRAU 10M Activity Contest SKCC Sprint Europe	3 ROC City Net 28.405 MHz, 7:30p K1USN Slow Speed Test	4 ARRL 160M Contest UFT Contest Wake-up1 QRP Sprint PRO CW Contest RTTYOps Weekend Sprint FT Roundup
5 K1USN Slow Speed Test ARRL 160M Contest UFT Contest PRO CW Contest RTTYOps Weekend Sprint FT Roundup	6 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SS WW Sideband Activity Contest ARS Spartan Sprint	7 RTTYOPS Weeksprint NAQCC CW Sprint QRP Foxhunt Phone Weekly Test - Fray	8 ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test VHF/UHF FT8 Activity Contest	9 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NCCC Sprints RTTYOPS Weeksprint	10 ROC City Net 28.405 MHz, 7:30p K1USN Slow Speed Test	11 PODXS 070 Low Band Sprint ARRL 10M Contest TRC Digi Contest SKCC Weekend Sprintathon ARI 40/80 Contest International Naval Contest
12 K1USN Slow Speed Test ODXS 070 Low Band Sprint ARRL 10M Contest TRC Digi Contest SKCC Weekend Sprintathon ARI 40/80 Contest International Naval Contest QRP ARCI Homebrew Sprint CQC Great Colorado Snowshoe	13 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SS WW Sideband Activity Contest	14 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test - Fray	15 ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test Walk for the Bacon QRP Test	16 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB Walk for the Bacon QRP Test NCCC Sprints RTTYOPS Weeksprint	17 ROC City Net 28.405 MHz, 7:30p K1USN Slow Speed Test AGB Party Contest Russian 160M Contest OK DX RTTY Contest RAC Winter Contest Feld Hell Sprint	18 License Testing at RIT ARRL EME Contest ARRL Rookie Roundup, CW Padang DX Contest Stew Perry Top Band Challenge Croatian CW Contes
19 K1USN Slow Speed Test ARRL EME Contest ARRL Rookie Roundup, CW Padang DX Contest Stew Perry Top Band Challenge Croatian CW Contes	20 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SS WW Sideband Activity Contest	21 RTTYOPS Weeksprint NAQCC CW Sprint Phone Weekly Test - Fray	22 ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test	23 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NCCC Sprints RTTYOPS Weeksprint	24 ROC City Net 28.405 MHz, 7:30p K1USN Slow Speed Test	25 Gedebage CW Contest
26 K1USN Slow Speed Test Gedebage CW Contest RAEM Contest DARC Christmas Contest	27 AWA Net 145.110 MHz, 7pm VHF Group 9pm 144.260 SS WW Sideband Activity Contest QCX Challenge	28 RTTYOPS Weeksprint QRP Foxhunt Phone Weekly Test - Fray	29 ROC City Net 3.810 MHz, 7 pm CWops Mini-CWT Test	30 ARES Net 146.610 MHz, 7pm VHF Group 9pm 50.200 USB NCCC Sprints RTTYOPS Weeksprint YOTA Contest	31 ROC City Net 28.405 MHz, 7:30p K1USN Slow Speed Test Bogor Old and New Contest	

NEWS FROM AREA CLUBS

MONROE COUNTY ARES / RACES NEWS

Monroe County Amateur Radio Emergency Service (ARES)® is an amateur radio public service organization based in Monroe County, New York, and is open to all licensed amateur radio operators. Monroe County Radio Amateur Civil Emergency Service (RACES) is a program of the Monroe County Office of Emergency Management. We participate in training and emergency exercises so that we can serve other agencies during times of communication failure.



The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month except in July, August, November and December. Anyone interested, members and non-members, are welcome to attend.

Until further notice, our meetings are via Zoom. Please check our website for any schedule changes. Prospective members can request an invitation by email to: secretary@monroecountymcomm.org.

Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 PM, on the N2MPE 146.61 MHz (-) 110.9 Hz PL and 444.45 MHz (+) 110.9 Hz PL repeaters. Our club callsign is WB2EOC.

There is no net on nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: www.monroecountymcomm.org

Facebook : Monroe County Amateur Radio Emergency Service, Inc.

Twitter @MCARESNY

Severe Weather Alerts: Winter may bring severe weather in the form of heavy snow storms, strong winds, and flooding. If you experience severe weather, especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. Have each check-in station give you a situational awareness report and emergency power report. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads). We encourage all amateur radio operators to take a free Skywarn TM class offered by the National Weather Service. The schedule of classes can be found at <https://www.weather.gov/buf/skywarn>

Monroe County ARES
George Adams IV, Net Control - cq@k4gwa.net

ROCHESTER DX ASSOCIATION, RDXA

In Person Meeting - Tuesday January 18, 2022 at 7:00pm

The next meeting will be at Johnny's Irish Pub,
1382 Culver Road.

Program will be "Field Day planning - 2022

NOTE: Earlier start time and new location.
Plenty of free parking alongside and behind the pub.

All are welcome.

Check our web site: www.rdxa.com.



ROCHESTER RADIO REPEATER ASSOCIATION

The Rochester Radio Repeater Association, RRRA will be having its regular meeting on December 17th at the Pittsford Town Hall's meeting room. If you're not vaccinated or feel threatened remember masks are always welcome. At December's meeting our members will be reviewing and voting on our bylaw changes. All members are asked to attend this very important meeting. You are the club, we need enough attendees at this meeting to form a voting quorum. If all goes well, we will be adopting the new bylaws after December's meeting.

Stay tuned to our web site, www.k2rra.org for current information on any changes to our meeting place. The elected RRRA officers for 2020 - 2021 are, Bob Shewell, N2HJD, President, Bob ODell, N2BZX, Vice President, ED Wilkon-ski, KC2WM Secretary, and Bob Smith, NS2B-Treasurer / Membership Chair-man. RRRA also accepts donations to the club. If you are not currently a member and want to support RRRA, you can join at our monthly meeting or on our web site. www.k2rra.org

XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club is not having in-person meetings at this time. We are having online meetings usually on the second Thursday of the months Sept-June. Get the latest updates at <http://xarc.us>

ROCHESTER VHF GROUP

You are invited to join us on-line & on-the-air! We're here to help you to use the license that you worked so hard to get.



Check out what we do by visiting our website at <http://RVHFG.org> to start.

Join our e-mail group by sending a message to RVHFG+subscribe@groups.io.

**Join our weekly on-the-air nets on SSB:
2 meter band - Monday 9 PM 144.260 USB
6 meter band - Thursday 9 PM 50.200 USB**

**No VHF SSB radio (yet) to join the nets?
Log-in to Echolink [ka2ene-L #23426](#)**

We can help to answer the question, "What radio should I buy?" Here's a list of HF+++ radios, those with the HF bands and at least three VHF bands, giving you access to all sorts of VHF fun. Research each one to see which serves you best. Ask questions on our email list. We're here to help!

Yaesu FT-100D	Yaesu FT-817	Yaesu FT-818
Yaesu FT-847	Yaesu FT-857	Yaesu FT-897
Icom IC-706MKIIG	Icom IC-7000	Icom IC-7100
Icom IC-9100	Kenwood TS-2000	

Some are older models and some are newer models, but all provide access to the 6 meter, 2 meter, and 70 centimeter bands using both traditional FM and the exciting narrow-band SSB mode that supports unexpectedly long-distance (100's of km's routinely and 1,000's of km occasionally) VHF communication. These are good all-around radios no matter what club you end up affiliating with later. We hope its us.

AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER, ARAST

Currently, ARAST meets the third Thursday of every month at the Emergency Communications Center on Harris Hill in Big Flats, next to the National Soaring Museum. Our Chemung County ARES (CCARES) organization meets the first Tuesday of the month except February at the same location. Both organizations serve amateurs in Chemung, Steuben and Schuyler counties in New York and Bradford and Tioga counties in Pennsylvania. All are welcome to attend our meetings.

NOTE: Both CCARES and ARAST monthly meetings are now being held both in person and online. Check out the Upcoming Events at our website, www.arast.info, for the latest details.

Don't forget to check out our repeaters when you visit the area. N3AQ 147.36(+) and the W2ZJ 146.70(-) are the principal 2-meter repeaters. The latter can also be accessed via Echolink node 574415 with the call sign KD2QND-R. A full list of repeaters that can be heard in the Twin Tiers area surrounding Chemung County can be found at http://www.arast.info/arast_website/public/repeaters.php.

We also invite you to check out our new 6 meter net on Wednesday evenings at 9 p.m. local time on 50.200 MHz USB. The net usually lasts approximately one hour. Operators are encouraged to check in and participate in the round table discussions or simply stop by from time to time. Topics are wide-reaching and are not confined to 6 meters--although discussions tend to center around 6-meter equipment, antennas, propagation, latest band openings and grid squares worked, as well as AM, FM and FT-8 use of the 6-meter band. We would welcome more participation from the western part of our area.

COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7PM. Each meeting has a brief training/refresher period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9PM (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30PM on 147.285+. We'd love to hear you check-in!

DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communication modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have members using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and publicly accessible DSTAR hotspots, Yaesu System Fusion systems on non-club repeaters and DMR systems through repeaters and personal hotspots. DCAP members meet for breakfast at 7AM nearly every Saturday morning at Rikki's Family Restaurant in the village of Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715MHz with a PL tone of 110.9Hz.

DRUMLINS AMATEUR RADIO CLUB

The Drumlins Amateur Radio Club meets every third Wednesday of the month at 7:30 PM at the Wayne County EMO/Sheriff's Office 7376 State Hwy 31 #1000, Lyons, NY 14489. Doors open at 7 pm, meeting starts at 7:30 pm. Announcements will be made on the 146.685 repeater. The Drumlins ARC website address is <http://drumlinsarc.us/>

KEUKA LAKE AMATEUR RADIO ASSOCIATION, KLARA

Hello all from Keuka Lake Amateur Radio Association.

We had a great summer and look forward to lots of radio contacts this winter. Many of us participated in the NYQSO party and had a great time. The Wine-glass Marathon went smooth with 19 of us radio operators along the 26 mile run from Bath to Corning. It was a rainy, cool day but everyone had a good time. Next the SKYWARN Recognition days Dec 3 and 4. If you haven't looked into it yet please do. It is 2 great days of making contacts all over by many different means of communications.. HF, Echolink, 2 meter, computer and the fun is seeing what the weather is all over the place. The best part is you can be a tech and still make lots of contacts! Everyone have a safe holiday season, stay healthy and hope to hear you on the air!

ORLEANS COUNTY AMATEUR RADIO CLUB

The Orleans County ARC meets every 2nd Monday of the month at the Orleans County Emergency Operations Center, 14064 West County House Road, Albion, NY 14411. Doors open at 6:00PM, meeting starts at 7:30PM. Anyone with an interest in amateur radio is welcome. Program topics vary from month to month.

The club has an open two meter net every Tuesday night at 9:00PM local time on the club repeater, WA2DQL/R (145.27 -600KHz offset, 141.3 tone). Everyone is welcome to check in.

See the club website <http://ocarc.us> or contact club Secretary Ron Craig, N5BNO for more information.

THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

THE RADIO AMATEUR IS:

CONSIDERATE	Never knowingly operating in such a way as to lessen the pleasure of others.
LOYAL	Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
PROGRESSIVE	With knowledge abreast of science, a well built and efficient station and operation beyond reproach.
FRIENDLY	With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
BALANCED	Radio is an avocation, never interfering with duties owed to family, job, school or community.
PATRIOTIC	With station and skill always ready for service to country and community.

SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) has changed its name to Ske-noh Island Amateur Radio Club and meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM. The next meeting will be Wednesday, December 8th and will be the annual Christmas Party and will be at The Antique Wireless Association Museum in Bloomfield, NY. The gathering will begin at 6:30PM. Please bring an appetizer or a dish to pass. Pizza and drinks will be provided.

Check the SIARC website for updates. <http://www.siarc.us/>

SIARC is also holding a Health and Welfare NET Monday through Friday each week at 2000 hours on the SIARC 146.820 repeater (located in Canandaigua, NY), Tone 110.9. This net is to pass along general information and keep hams in touch. All hams are invited to participate.

GENESEE VALLEY AMATEUR RADIO ASSOCIATION

Email n3dsp@lafireline.net for details.

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Visit our website at <http://www.interlockroc.org/>, contact us at info@interlockroc.org, or find us in #interlock on Freenode IRC.

ROCHESTER MAKERSPACE

For more information visit <https://www.makerspacerochester.org/hamradio>

ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

For more information visit <http://www.rochesterastronomy.org/>

RAG ARTICLE LAYOUT HINTS

- Orientation - Landscape
- Main Text Box H - 7.7, W - 10.4
- 2 columns, 0.3 spacing between columns
- Font: Arial
- Title: 20 pt, Bold, Small Caps
- Author: 10 pt, Bold, Small Caps
- Main Text: 10 pt
- Single space after periods
- Text Alignment: Justified
- Title & Author Alignment: Centered
- No special formatting
- Try to limit pictures to the width of a column
- Picture Format: jpg or png
- Document format: Microsoft Word compatible or text. No special embedded formatting.

RARA OFFICERS, DIRECTORS AND COORDINATORS

OFFICERS

President: Tim Barrett, K9VB	(646) 496-5015	president@rochesterham.org	Treasurer: Mike Moore, KC2NM	(585) 721-0011	treasurer@rochesterham.org
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Rochester DX Association (RDXA)

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Rochester Makerspace

David Duckles: rocmakers@gmail.com

Rochester Radio Repeater Association (RRRA)

Bob Shewell, N2HJD: bshewell@frontiernet.net

Rochester VHF Group (RVHFG)

Rus Healy, K2UA: chairman@rvhfg.org

Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR: sbenton2@rochester.rr.com

XRX Amateur Radio Club

Brian Donovan, K2AS: k2as@outlook.com

JANUARY RAG DEADLINE

DECEMBER 15, 2021

**RARA MEETS AT 7PM ON THE FIRST
WEDNESDAY OF EACH MONTH.**

JOIN US IN PERSON AT

SENECA WATERWAYS COUNCIL, BSA HEADQUARTERS
2320 BRIGHTON HENRIETTA TOWN LINE RD
ROCHESTER, NEW YORK 14623

OR ON-LINE AT:

<https://attendee.gotowebinar.com/register/6922222162337328655>

CONTACT WEBMASTER@ROCHESTERHAM.ORG FOR SUPPORT

Rochester Area Repeater Listing

THE RARA RAG

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P.O. Box 93333, Rochester, NY, 14692-8333
Hotline – (585) 210- 8910

Website – <http://www.rochesterham.org>